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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/663,416
Filing Date: September 16, 2003
Appellant(s): RANDOLPH ET AL.

James E. Ruland
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5/4/2010 appealing from the Office action mailed 12/7/2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-6, 8, 9, 30-35, 37 and 38 are rejected and pending.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

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subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

NEW GROUND(S) OF REJECTION

Claims 1-6, 8, 9, 30-35, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahar et al. (US 2001/0024755).

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

2001/0024755

BAHAR et al.

09-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-6, 8, 9, 30-35, 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Bahar et al. (US 2001/0024755).

Regarding claims 1, 4, 8, 9, 30, 33 and 37-38

Bahar teaches polymer compositions that can consist of polymer and a compound that is a perhaloalkylsulfonic acid (ion exchange resin) (paragraphs 0015-0025 and 0067-0071), and since the reference teaches that the polymer contains the ion exchange resin it would be expected to be able to hold it in place.

With regards to the claim limitation of "wherein said composition is in a reactor", it is noted that even the title of the reference "Solid Electrolyte Composite for

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Electrochemical REACTION APPARATUS”, here given its broadest reasonable interpretation a “REACTION APPARATUS” would be a reactor, as it is a container holding agents that are reacting. Further it is noted that this limitation is not seen to limit the composition itself.

With regards to the limitation of the composition being pourable it is noted that 1.) This is not seen to limit the composition in any way as anything is pourable at some scale 2.) The reference teaches that the pores of the membrane are filled with a polymer electrolyte/ion exchange resin (paragraph 0018-00025), and the reference defines the ion exchange resin (paragraphs 0056-0071), and one skilled in the art would expect that these composition would be pourable since they must be deposited within the pores of a membrane, absent any evidence to the contrary.

Bahar teaches that the polymer porosity should be between 40 and 95 %, preferably 70 % (paragraph 042), and since the pores are filled with the acid component, this would read on the claims amount of acid component, absent any evidence to the contrary, as the skilled artisan would expect that a composition filling 40-95 %, preferably 70 % of a volume would read on at least 5 wt %, as the densities would not be expected to differ so greatly as to read on less than 5 wt %.

Regarding claims 2, 3, 31, and 32

Bahar teaches that the polymer can be polyacrylic acid (paragraph 0059).

Regarding claims 5, 6, 34, and 35

These claims only limit the composition when the acid component is selected from groups 4 or 5 from claims 1 or 30.

NEW GROUND(S) OF REJECTION

Claim Rejections - 35 USC § 103

Claims 1-6, 8, 9, 30-35, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahar et al. (US 2001/0024755).

Regarding claims 1-6, 8, 9

It is the opinion of the examiner that the amounts of acid component in the reference will necessarily read on the claimed range. The reasoning for this is presented in the 102(b) rejection made against these claims. However, if the amount of the acid component is not necessarily inherent as has been argued by the examiner, then the optimal amount of acid component would have been determined through routine experimentation in the art in an effort to improve the composition taking into account factors such as if not enough acid component is used, then there may be a lack of the desired activity, and conversely if too much acid is used then the selectivity may be decreased and the cost increased as more than the optimal amount of catalyst (i.e. acid component) is used.

Regarding claims 30-35, 37 and 38

It is the opinion of the examiner that for the reasons given in the 102(b) rejection below that all compositions are “pourable” at some scale. However, here it is noted that there are no special definitions of “pourable” given in the specification, and the claims do not put any limitations as to the “pourability” with no size or time dimensions, as such it is given its broadest reasonable interpretation. Based on the above reasoning and that given in the 102(b) rejection, one of ordinary skill in the art at the time would have found

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it obvious to have the composition in a “pourable” form depending upon the desired use, such as for loading into a reaction column or a chemical reactor, where one would expect that the catalyst product would need to be added (i.e. poured) to a reaction column or chemical reactor for use in catalytic conversions..

(10) Response to Argument

A. Claims 1-6, 8, 9, 30-35, 37 and 38

Appellants argue that the reference of Bahar fails to teach that the acid component is present in a range of about 5 to about 90 wt. %. This is not persuasive because as stated in the rejection the porosity of the polymer is preferably 70 %, and this is filled with the acid component, and since this would leave approximately 70 volume % of the acid component, and since the densities of the acid component are not since the polymer component and the acid component are both organic resins the densities would be close enough that 70 volume % of the acid component would be well within the limits of about 5 to about 90 wt. %. Even if the densities were different by a factor of 2, which they are not, the composition of the reference would still read directly upon the instant invention. Even when the acid component is in solution, it would still be expect to provide more than about 5 wt. %, and would result in less than the approximately 70 wt. % assumed from above. Therefore even though the reference does not explicitly teach the weight percents, it inherently possesses a weight percent within the claimed range.

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Appellants argue that the solutions used only contain about 9 wt % of the acid component. This is not persuasive because the reference teaches that the pores can be completely filled, and since the porosity can be up to 95 %, then 9 % of 95 %, would lead to about 8.5 %, which would still be well within the claimed range. It is further noted that the acid component perhalosulfonic acid would be expected to be slightly more dense due to the heteroatoms present, which would actually slightly raise the 8.5 wt % higher.

Appellants argue that Bahar uses a vast array of polymeric sheets that can vary in porosity, namely at least 35 %. This is not persuasive because applicants have not claimed a specific polymeric sheet, and the range of the acid component in the instant invention possesses a bigger range than that which is inherent based on the porosity of the reference.

B. Claims 8 and 37

Appellants argue that in the examples of Bahar only 9 wt % solution is used, which would not read on and anticipate the claims about 30 to about 85 wt %. This is not persuasive and it is noted that a reference is good for all that it teaches and is not limited to the examples or preferred embodiments. It is also noted that the reference teaches that the porous polymeric sheet is filled, preferably completely with the polymer electrolyte “Preferably the interior volume of the sheet is substantially occluded by electrolyte” (paragraph 0093), and further teaches in claim 19 that the porous structure is substantially filled with a polymer composition. Based on the above we can clearly

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see that the pores are not limited to being only filled at a (% loading as argued by appellants.

C. Claims 9 and 38

Appellants argue that Bahar fails to teach the use of about 50 to about 80 wt. %. This is not persuasive based on the above reasoning which is reiterated here for clarity.

1.) The reference teaches that the porosity can be up to 95 %, preferably 70 %, which leaves up to 95 %, preferably 70 % for the acid component.

2.) The reference teaches that the pores are preferably completely filled with the acid component.

3.) Based on similar densities at the preferable conditions of the reference, this would leave about 70 wt % acid component, which clearly reads on the claimed range.

D. Claims 30-35, 37 and 38

Appellants argue that Bahar's composition includes a functional material and thus can not anticipate the instant invention, which uses "consisting of" language. This is not persuasive as when looking at paragraphs 0015-0025, which were cited in the rejection the composition has a polymeric sheet where the functional material iii.) is an organic polymer and the polymer electrolyte can be iii.) an ion-exchange resin. Here it is noted that the polymeric sheet and the organic polymer are seen to together read on the polymer component for holding the acid component in place.

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With respect to the composition being pourable, it is noted that all things are pourable at some scale.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) Reopen prosecution. Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) Maintain appeal. Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR

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41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

/James E McDonough/

Examiner, Art Unit 1793

Conferees:

/J.A. LORENZO/
Supervisory Patent Examiner, Art Unit 1793

/Gregory L Mills/
Supervisory Patent Examiner, Art Unit 1700

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

/Gregory L Mills/

Supervisory Patent Examiner, Art Unit 1700